PII S0093-6413(96)00070-5

MECHANICS Research Communications

Volume 23, 1996

LIST OF CONTENTS AND AUTHOR INDEX

List of Contents to Volume 23, 1996

1996 Vol. 23, No. 1 CONTENTS Scientific and Applied Communications M. CIARLETTA and E. SCARPETTA Some Results on Thermoelasticity for Porous Piezoelectric Materials D.Y. GAO 11 Nonlinear Elastic Beam Theory with Application in Contact Problems and Variational Approaches G. BORINO, P. FUSCHI and C. 19 Elastic-Plastic-Damage Constitutive Models with C. POLIZZOTTO Coupling Internal Variables B. WU 29 Compound Buckling of a Strut with a Lateral Elastic Support at Center B.S. ALTAN, H.A. EVENSEN and 35 Longitudinal Vibrations of a Beam: A Gradient E.C. AIFANTIS Elasticity Approach R.M. HAYTHORNTHWAITE and 41 Plane Strain in Granular Media T. QUABILI L. STAGNI A Unified Treatment of the Elliptic Inhomogeneity with a Slipping Interface under Line-Singularity Loading A. ZOLOCHEVSKY The Formulation of Constitutive Equations for 55 Fibre-Reinforced Composites with Different Behaviour in Tension and Compression C. PRAX and H. SADAT Co-Located Diffuse Approximation Method for Two 61 Dimensional Incompressible Channel Flows P. ROYER, J.L. AURIAULT and 67 Macroscopic Behavior of Gas Flow with Adsorption T. STRZELECKI Through a Fractured Porous Medium P. CAPODANNO 75 Etude mathématiques des petites oscillations de deux liquides pesants non miscibles dans un container

N.D. NANOUSIS 81 The Unsteady Hydromagnetic Thermal Boundary Layer with Suction 91 Coincidence of Turbulent-Nonturbulent Interface S. FIRASAT ALI and E.A. IBRAHIM and Hot-Cold Interface in a Plane Turbulent Wake M.A. YÜKSELEN 103 Superposition Technique for Two Dimensional Potential Flow Around Multi-Element Aerofoils Announcements 18 CISM Programme 1996. Fifth Pan American Congress of Applied 54 Mechanics, PACAM V, January 2-4, 1997, San Juan, Puerto Rico. 74 Society of Engineering Science 33rd Annual Technical Meeting, October 20-23, 1996, Tempe, Arizona, USA.

1996		Vol. 23, No. 2
* 1		CONTENTS
		Scientific and Applied Communications
A. ABAD and F. BELIZÓN	111	Potential of Attraction for an Elliptic Ring
M.L. MARTINS-COSTA and R.M. SALDANHA DA GAMA	117	Constitutive Relations for the Energy Transfer in Nonsaturated Continuous Mixtures
B. BURNAYEV	123	Small Perturbations in the Medium of Variable Mass
L. ZHAO and Q. CHEN	131	A New Equivalent Nonlinearization Method for Random Vibrations of Nonlinear Systems
H.S. COSTA MATTOS and F.E.G. CHIMISSO	137	Modeling the Necking of Tension Members Using a Theory of Rods
F. DELL'ISOLA and L. ROSA	145	Perturbation Methods in Torsion of Thin Hollow Saint-Venant Cylinders
L CHEIKH, C. PAUCHON, CH. LAMARQUE, A COMBESCURE and R.J. GIBERT	151	Nonlinear Stability of a Defective Cylindrical Shell
A.N. BERÇIN	165	Natural Frequencies of Cross-Ply Laminated Singly Curved Panels
Q. WANG, X. JI and Y. WANG	171	3D Axisymmetric Analysis of a Cracked Fiber in a Transversely Isotropic Elastic Medium

175	Dynamic Stability of Rotating Composite Shafts
181	Optimum Design of Cam Mechanisms with Oscillating Flat-Face Followers
139	Waves Generated by a Plane Source of Dilatation in a Viscoelastic Medium
195	Quadratic Programming for Degenerate Shakedown Problems of Bar Structures
205	The Hybrid Boundary Element Method in Elastodynamics
213	Finite Element Method for Frames with Variable Characteristics
221	Fixed-Hinged Beam Finite Elements Used for Dynamic Analyis of Frames
227	Boundary Integral Transformation of Body-Force Volume Integral in BEM for 2D Anisotropic Elas- ticity
	Announcements
144	4th World Congress on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, ExHFT 4, June 2-6, 1997, Brussels, Belgium.
188	Second International Symposium on Thermal Stresses and Related Topics, THERMAL STRESSES'97, June 8-11, 1997, Rochester, New York, U.S.A.
204	14th International Conference on Structural Mechanics in Reactor Technology, SMiRT 14, August 17-22, 1997, Lyon, France.
	Vol. 23, No. 3
	CONTENTS
	Scientific and Applied Communications
233	Nöther's Theorem in the Elastic Dynamics of Microcracked Bodies
239	Bounds on the Off-Diagonal Coefficients of the Homogenized Constitutive Tensor of a Composite Material
	181 139 195 205 213 221 227 144 188 204

V.K. KALPAKIDIS	247	On the Dynamical Theory of Thermoelastic Di- electrics with Polarization Inertia
J.F. SHAO and R. KHAZRAEI	257	A Continuum Damage Mechanics Approach for Time Independent and Dependent Behaviour of Brittle Rock
S. AMARNATH and K.R.Y. SIMHA	267	Torsion of Half-Space with Lined Cylindrical Hole
Q.Z. XIAO, C.C. WU and M.G. HUANG	277	A Study on the Dual Integral of J
R.H. RAND	283	Dynamics of a Nonlinear Parametrically-Excited PDE: 2-Term Truncation
M. LARA	291	On Numerical Continuation of Families of Periodic Orbits in a Parametric Potential
C. MENDOZA	299	Yet Another Proof of the II-Theorem
C.Y. WANG	305	Rotation of a Slotted Cylinder in a Fluid at Low Reynolds Number - Implication on the No-Slip Condition for Grates
A.A. ABDEL-RAHMAN, S.F. AL-FAHED and W. CHAKROUN	313	The Near-Field Characteristics of Circular Jets at Low Reynolds Number
H.S. TAKHAR and G. NATH	325	Unsteady Three-Dimensional Flow Due to a Stretching Flat Surface
		Announcements
	246	Third International Conference on Composites Engineering, July 21-26, 1996, New Orleans, Louisiana, U.S.A.
	266	35th Annual Technical Meeting of the Society of Engineering Science, Washington State University, September 27-30, 1998, Pullman, Washington, U.S.A.

1996

Vol. 23, No. 4

CONTENTS

Scientific and Applied Communications

Z.-Q. CHENG, W. LIANG and D. CHEN
 F. MAROTTI DE SCIARRA
 Compatible Mixed Formulations for Elastoplastic Models
 F. PASSARELLA
 Some Results in Micropolar Thermoelasticity
 P. SAFFRÉ, A. BERGERET, J.L. LIGIER and J. PASTOR
 A Four-Layered Self-Consistent Scheme Applied to Two-Phase Composites

P.K. RAJENDRAKUMAR and S.K. BISWAS	367	Elastic Contact Between a Cylindrical Surface and a Flat Surface - A Non-Hertzian Model of Multi- Asperity Contact
M. BELHAQ and A. FAHSI	381	Homoclinic Bifurcations in Self-Excited Oscillators
S. JACOB, K.M. PATIL, L.H. BRAAK and A. HUSON	387	Stresses in a 3D Two Arch Model of a Normal Human Foot
T. BALKAN	395	A Load Control System for Mobile Cranes
K.R. RAJAGOPAL and M. RŮŽIČKA	401	On the Modeling of Electrorheological Materials
E.A. IBRAHIM	409	Satellite Drop Formation in a Swirling Liquid Jet
I. POP and TY. NA	413	Unsteady Flow Past a Stretching Sheet
		Announcements
	338	Chandrasekhar Memorial Symposium, 33rd Annual Technical Meeting, ASME, Arizona State Universi- ty, October 20-23, 1996, Tempe, Arizona, U.S.A.
	358	25th Midwestern Mechanics Conference, South Da- kota School of Mines and Technology, September 21-24, 1997, Rapid City, South Dakota, U.S.A.
1996		Vol. 23, No. 5
		CONTENTS
		Scientific and Applied Communications
н.м. үеніа	423	New Integrable Problems in the Dynamics of Rigid Bodies with the Kovalevskaya Configuration. I - The Case of Axisymmetric Forces
н.м. үеніа	429	New Integrable Problems in the Dynamics of Rigid Bodies with the Kovalevskaya Configuration. II - The Case of Asymmetric Forces
D. HUILIER and H. BURNAGE	433	Numerical Simulation of Particle Dispersion in a Grid Turbulent Flow: Influence of the Lift Forces
E. KIM	441	The Influence of Reynolds Number and Heat Transfer in Fluid Film Lubrication
G.P. RAJA SEKHAR and T. AMARANATH	449	Stokes Flow Past a Porous Sphere with an Impermeable Core
L. BADEA and M. PREDELEANU	461	On the Dynamic Cavitation Problem in Viscoplastic Solids
D. RITTEL and H. MAIGRE	475	A Study of Mixed-Mode Dynamic Crack Initiation in PMMA
		(0 0

formations
ons in
Strains in
orsion
stems
asurement es
ension and Porous
sticity
rgy
exure of Sections
ssed
Analysis, 5, 1997,
l. 23, No. 6
nitted

K.N. MOUTSOPOULOS, I.E. ELEFTHERIADIS and E.C. AIFANTIS	577	Numerical Simulation of Transport Phenomena by Using the Double Porosity/Diffusivity Continuum Model
A. KOUROUKAFOPOULOS, N.K. HATZITRIFON, T. WEBB and E.C. AIFANTIS	583	Equilibrium Solute Distribution Near an Interface Crack Tip and Environment-Assisted Cracking in Bi-Materials
C.W. BERT and K. KANG	589	Stress Analysis of Closely-Coiled Helical Springs Using Differential Quadrature
A. CAROTTI and E. TURCI	599	A New Servoassisted Hyper-Stiffened Damper for Structural Control: The "IRIS" Project
Y. LIANG, X. YANG, C. ZHOU and Z. WANG	607	Application of Neural Networks to Identification of Nonlinear Characteristics in Cushioning Packaging
S. DIAO, Q.H. QIN and J. DONG	615	On Branched Interface Cracks Between Two Piezo- electric Materials
A.P.S. SELVADURAI	621	On the Problem of an Electrified Disc Located at the Central Opening of a Coplanar Earthed Sheet
B.W. GOLLEY	625	Natural Frequencies of Rectangular Plates
J.J. BARRAU, J.M. SEGURA and G. ARMENGAUD	633	Influence des Constraintes Normales Transversales dans les Poutres Courbes Sandwich et en I Soumises à la Flexion
		Announcements
	614	CISM Programme 1997
	632	II International Aerospace Congress, IAC'97, August 31-September 5, 1997, Moscow, Russia
	643	List of Contents and Author Index, Vol. 23, 1996